CD68 Cell Lysate – Tissue Lysate

PRODUCT OVERVIEW

Product Name	CD68, Cell Lysate
Full Product Name	Human CD68 HEK293 Overexpression Lysate
Product Gene Name	CD68 cell lysate
Product Synonym Names	Human CD68 CHO Cell Lysate (WB positive control); CD68 molecule; Human GP110 Overexpression Lysate; Human LAMP4 Overexpression Lysate; Human SCARD1 Overexpression Lysate
Sequence	Met1-Ser31 9
Host	HEK293 Cells
Form/Format	1x Sample Buffer (1x modified RIPA buffer+1x SDS loading buffer). Modified RIPA Lysis Buffer: 50 mM Tris-HCl pH 7.4, 150 mM NaCl, 1mM EDTA, 1% Triton X-100, 0.1% SDS, 1% Sodium deoxycholate, 1mM PMSF.
Preparation and Storage	Store at 4 degree C for up to twelve months from date of receipt. After re-dissolution, aliquot and store at -80 degree C for up to twelve months. Avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt.
Molecular Weight	34,654 Da
Sequence Positions	536aa
OMIM	153634
3D Structure	ModBase 3D Structure for P34810
Species	Human
Recommend Usage	1. Centrifuge the tube for a few seconds and ensure the pellet at the bottom of the tube.**2. Re-dissolve the pellet using 200uL pure water and boil for 2-5 min.** **3. Store the lyophilized cell lysate at 4 degree C. After re-dissolution, recommend to aliquot it into smaller quantities and store at -80 degree C.**
Sequence Construction	A DNA sequence encoding the human CD68 (NP_001242.2) (Met1-Ser319) was expressed with the Fc region of human IgG1 at the C-terminus.
Preparation Method	Cell lysate was prepared by homogenization in ice-cold modified RIPA Lysis Buffer with cocktail of protease inhibitors. Cell debris was removed by centrifugation. Protein concentration was determined by Bradford assay (protein assay, Microplate Standard assay). The cell lysate was boiled for 5 min in 1 x SDS loading buffer (50mM Tris-HCl pH 6.8, 12.5% glycerol, 1% sodium dodecylsulfate, 0.01% bromophenol blue) containing 5% b-mercaptoethanol, and lyophilized.
Applications Tested/Suitable for CD68 cell lysate	Western Blot (WB)
Application Notes for CD68 cell lysate	WB: Use at an assay dependent dilution.

Related Product Information for CD68 cell lysate	Macrosialin, also known as CD68 and Gp11, is a single-pass type I membrane protein which belongs to theLAMP family. CD68 is highly expressed by blood monocytes and tissue macrophages. It is also expressed in lymphocytes, fibroblasts and endothelial cells. CD68 is expressed in many tumor cell lines which could allow them to attach to selectins on vascular endothelium, facilitating their dissemination to secondary sites. CD68 plays a role in phagocytic activities of tissue macrophages, both in intracellular lysosomal metabolism and extracellular cell-cell and cell-pathogen interactions. It is a commonly used marker for macrophages. However, a number of studies have shown that CD68 antibodies react with other hematopoietic and non-hematopoietic cell types, suggesting that CD68 may not be a macrophage-specific antigen. CD68 binds to tissue-and organ-specific lectins or selectins, allowing homing of macrophage subsets to particular sites. Rapid recirculation of CD68 from endosomes and lysosomes to the plasma membrane may allow macrophages to crawl over selectin-bearing substrates or other cells. This Human CD68 overexpression lysate was created in HEK293 Cells and intented for use as a Western blot (WB) positive control. Purification of CD68 protein from the overexpression lysate was verified.
Product References and Citations for CD68 cell lysate	Strobl H. et al., 1995, Br J Haematol. 90 (4): 774-82. Ogawa Y. et al., 1995, Pathol Int. 45 (9): 698-701. Sadovnikova E. et al., 2002, Leukemia. 16 (10): 2019-26. Gottfried E. et al., 2008, Scand J Immunol. 67 (5): 453-63. Strojnik T. et al., 2009, Anticancer Res. 29 (8): 3269-79.
Other Notes	Small volumes of CD68 cell lysate vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CD68 purchase	MBS8114466 is a cell lysate targeting CD68. Also known as Human CD68 HEK293 Overexpression Lysate. Host: HEK293 Cells.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CD68. It may not necessarily be applicable to this product.

NCBI GI #	91199548
NCBI GeneID	968
NCBI Accession #	NP_001242.2
UniProt Primary Accession #	P34810
UniProt Secondary Accession #	Q53HR6; Q53XI3; Q96BI7; B4DVT4
UniProt Related Accession #	P34810
GenBank Nucleotide #	NM_001251.2
NCBI Official Full Name	macrosialin isoform A
NCBI Official Synonym Full Names	CD68 molecule
NCBI Official Symbol	CD68
NCBI Official Synonym Symbols	GP110; LAMP4; SCARD1
UniProt Protein Name	Macrosialin
UniProt Synonym Protein Names	Gp110
Protein Family	Macrosialin
UniProt Gene Name	CD68
UniProt Entry Name	CD68_HUMAN
NCBI Protein Information	macrosialin; CD68 antigen; macrophage antigen CD68; scavenger receptor class D, member 1

UniProt Comments for CD68	CD68: Could play a role in phagocytic activities of tissue macrophages, both in intracellular lysosomal metabolism and extracellular cell-cell and cell-pathogen interactions. Binds to tissue- and organ-specific lectins or selectins, allowing homing of macrophage subsets to particular sites. Rapid recirculation of CD68 from endosomes and lysosomes to the plasma membrane may allow macrophages to crawl over selectin-bearing substrates or other cells. Belongs to the LAMP family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Cell surface; Membrane protein, integral Chromosomal Location of Human Ortholog: 17p13 Cellular Component: membrane; lysosomal membrane; plasma membrane; integral to membrane; endosome membrane
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